(**Adopted:** 05/07/76; **CARB Ex. Ord. G-73:** 02/01/77;
Readopted: 07/25/77; **Amended:** 08/24/94)

RULE 464
Oil-Water Separators

(A) General

(1) Purpose: The purpose of this rule is to reduce emissions of volatile organic compounds (VOCs) from oil-water separators.

(2) Applicability: This rule applies to any structure or system which collects process effluent water contaminated with oil or other petroleum products and recovers 760 liters (201 gallons) a day or more of any petroleum products with a Reid vapor pressure of 25 mm Hg (0.5 pound per square inch) or greater.

(B) Definitions

For the purposes of this rule only, the following definitions shall apply:

(1) "Control Device:" - Any device for reducing emissions of VOC to the atmosphere.

(2) "Effluent Water" - Any wastewater generated as a byproduct of industrial processes and containing dissolved, particulate organic materials. Consists of a mixture of water with a petroleum product, including but not limited to the following: gasoline, kerosene, distillate fuel oils, residual fuel oils and lubricants.

(3) "Fixed Cover" - Any cover made out of metal(s), polymer(s) or other material, and installed in a permanent position over the liquid.

(4) "Floating Cover" - Any cover made out of metal(s), polymer(s) or other material, which is in contact with a liquid surface at all times.

(5) "Forebay" - That section of a gravity-type separator which (a) receives the untreated, contaminated effluent water from the preseparator flume, and (b) acts as a header which distributes the influent to the separator channels.

(6) "Fugitive Vapor Leak (Leak)" - The detection of 10,000 ppm or greater, using an appropriate hydrocarbon analyzer when sampling is performed according to the procedures specified in EPA Method 21.

(7) "Non-Contact Water Cooling Systems" - Any system which involves the cooling of organic vapors via coolant injected through piping. There is no contact between the cooling fluid and the vapors being cooled.

(8) "Oil-Water Separator" - Any device or piece of equipment, which utilizes the difference in density between oil or petroleum products and water to remove the oil or associated chemicals from the water.

(9) "Organic Materials:" - Chemical compounds of carbon, excluding carbon monoxide, carbon dioxide, metallic carbides, metallic carbonates and ammonium carbonate.

(10) "Organic Vapors"- Chemical compounds of carbon, excluding carbon monoxide, carbon dioxide, metallic carbides, metallic carbonates and ammonium carbonate in their gaseous state.

(11) "Overall Control Efficiency" - Is the product of the capture efficiency multiplied by the control efficiency; the weight per unit time of VOC removed by a control device divided by the weight per unit time of VOC emitted by an emission source, expressed as a percentage.

(12) "Petroleum Products" - Any crude oil or oil distillate derived from tar sands, shale or coal, including, but not limited to gasoline, kerosene, distillate fuel oils, residual fuel oils and lubricants.

(13) "Reid Vapor Pressure" - The absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids, except liquified petroleum gases, as determined by ASTM D 323-89.

(14) "Vapor Recovery System" - A vapor-gathering system capable of collecting VOC vapors and gases emitted during the operation of equipment.

(15) "Volatile Organic Compound (VOC):" - Any compound containing at least one atom of carbon, except for the following :

methane
carbon monoxide,
carbon dioxide,
carbonic acid,
metallic carbides or carbonates,
ammonium carbonate,
1,1,1-trichloroethane,
methylene chloride,
trichlorofluoromethane (CFC-11),
dichlorodifluoromethane (CFC-12),

chlorodifluoromethane (HCFC-22),
trifluoromethane (HFC-23)
1,1,1- trichloro-2,2,2-trifluoroethane (CFC-113),
1-chloro-1,1-difluoro-2-chloro-2,2-difluoroethane (CFC-114),
chloropentafluoroethane (CFC-115),
2,2-dichloro-1,1,1-trifluoroethane (HCFC-123),
2-chloro-1,1,1,2-tetrafluoroethane (HCFC 124),
pentafluoroethane (HFC-125),
1,1,2,2-tetrafluoroethane (HFC-134),
1,1,1,2-tetrafluoroethane (HFC-134a),
1,1-dichloro-1-fluoroethane (HCFC-141b),
1-chloro-1,1-difluoroethane (HCFC-142b),
1,1,1-trifluoroethane (HFC-143a),
1,1-difluoroethane (HFC-152a),

and the following four classes of perfluorocarbon (PFC) compounds:

(i) cyclic, branched, or linear, completely fluorinated alkanes,

(ii) cyclic, branched, or linear, completely fluorinated ethers with no unsaturations,

(iii) cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations, and

(iv) saturated perfluorocarbons containing sulfur with sulfur bonds only to carbon and fluorine.

(C) General Requirements

(1) Fugitive Vapor Control Devices

(a) A person shall not use any oil-water separator subject to the provisions of Section (A)(2), unless it has been equipped with one of the following vapor loss control devices:

(i) A fixed cover with all openings sealed and totally enclosing the liquid contents of the compartment, except for such breathing vents as are structurally necessary; or

(ii) a floating cover, equipped with seals to enclose any space between the cover's edge and compartment wall or

(iii) Route all vapors to a control device with an overall control efficiency (collection and control efficiencies) of at least 90 percent by weight of VOCs, measured according to the test method specified in Section (G)(4).

(b) Any oil-water separator subject to this rule shall provide the following vapor loss control device:

(i) a fixed cover for all forebays, such that no liquid surface is exposed to the atmosphere.

(2) Requirements for Covers

(a) Covers for oil-water separators shall meet the following requirements:

(i) The cover material shall be impermeable to VOCs, and free from holes or openings.

(ii) Any gauging or sampling devices on the compartment cover shall be covered. The latter cover shall be kept closed, with no visible gaps between the cover and the compartment, except when the sampling device is being used.

(iii) Hatches on covers shall be kept closed and free of gaps, except when opened for inspection, maintenance or repair.

(iv) The perimeter of a cover, except for a floating cover, shall form a seal free of gaps with the foundation to which it is installed.

(3) Fugitive Vapor Leak Monitoring

(a) When an instrument reading of 10,000 parts per million [ppm] <u>or greater</u> is measured, a leak has been detected and the reading shall constitute a violation of this rule.

(D) Exemptions

(1) The provisions of this rule shall not apply to:

(a) segregated storm water runoff drain systems or to non-contact cooling water systems, where applicable.

(E) Monitoring

(1) Monitoring for fugitive vapor leaks shall be performed on a monthly basis and in accordance to test method specified in Section (G)(1). Monitoring records shall be kept on file as prescribed in Section (F)(1).

(2) Monitoring of the control device shall be performed on an annual basis and in accordance to the test method specified in Section (G)(4).

(F) Record Keeping

(1) A log of the monthly leak inspection shall be kept on file at the facility. The log shall record, at a minimum, the following information:

(a) Date of the inspection.

(b) Findings, (statement of no leaks or the location, nature and severity of the leak(s)) including instrument readings.

(c) Leak determination method (shall be in accordance to the test method specified in Section (G)(1), using an appropriate hydrocarbon analyzer).

(d) Corrective action (date of leak repair and a written justification for any repair interval in excess of 15 calendar days).

(e) Inspector's name and signature.

(2) Any person using an emission control device/system pursuant to Section (C)(1) as a means of complying with provisions of this rule shall maintain records of key system operating and maintenance data for the purpose of demonstrating continuous compliance during periods of emission producing activities. The data shall be recorded in a manner as prescribed by the District.

(3) Any facility claiming exemption pursuant to Sections D(1) or (A)(2) of this rule shall keep records to substantiate the claimed exempt status.

(4) Any record required or produced pursuant to this rule shall be retained on site for a minimum of two years and shall be made available to the APCO upon request.

(G) Test Methods For Compliance Verification

A violation determined by any one of these test methods shall constitute a violation of the rule:

(1) Fugitive Vapor Leaks - Detection of VOCs - EPA Method 21 shall be used to determine compliance with this rule in regards to fugitive or VOC leaks. Instrument shall be calibrated with Method 21 using zero air (less than 10 parts per million [ppm] of hydrocarbon in air) with a mixture of methane or n-hexane.

(2) Determination of Exempt Compounds Content - Determination of the content of exempt compounds in solvents or any diluents shall be determined by ASTM D 4457-85. Perfluorocarbon compounds shall be assumed to be absent from a product or process unless a manufacturer or facility operator identifies the specific individual compounds (from the broad classes of perfluorocarbon compounds) and the amounts present in the product or process and identifies a validated test method which can be used to quantify the specific compounds.

(3) Determination of Reid Vapor Pressure - Shall be determined by measuring the Reid Vapor pressure in accordance with Test Method for Vapor Pressure for Petroleum Products, ASTM D 323-82.

(4) Control Device Efficiency - Determining the destruction or removal efficiency of a control device shall be:

for systems utilizing add-on control equipment, EPA Method 25 or 25A, as applicable.

for incinerators or catalytic incinerators, EPA Method 25, unless the concentration of VOC in the outlet stream is below 50 ppm as carbon, in which case EPA Method 25A shall be used.

[SIP: Approved 9/27/95, 60 FR 49722, 40 CFR 52.220(c)(202)(i)(D)(1); Approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(iv)(C); Approved 6/14/78, 43 FR 25684, 40 CFR 52.220 (c)(32)(iv)(A)]